



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

Journal of the Society of Arts.

FRIDAY, AUGUST 29, 1862.

INTERNATIONAL EXHIBITION OF 1862.

SEASON TICKETS.

Season Tickets may be obtained at the Society's House, on application to Mr. S. T. Davenport, Financial Officer. The prices of the tickets are as follows:—£2 10s., admitting to the International Exhibition and the Gardens of the Royal Horticultural Society every day during the remainder of the season; £1 10s., admitting to the Exhibition only, every day; and 10s., admitting to the Exhibition on shilling days only.

The delivery of the Medals and Certificates of Honourable Mention to the Exhibitors cannot take place till after the close of the Exhibition, when it will be made at a public ceremony in the building, to which will be admitted the holders of all classes of season tickets (except those for shilling days), and the public on payment of £1 each.

REPORTS OF THE JURIES.

The Council of the Society of Arts have felt the importance of having some permanent and authoritative Record of the International Exhibition, and finding that Her Majesty's Commissioners have provided only for the publication of the awards of the Juries, but not of their Reports descriptive of the Progress of Industry since the Exhibition of 1851, the Council have undertaken this work, with the co-operation of Her Majesty's Commissioners and of the Juries, and have placed the matter in charge of Dr. Lyon Playfair, the Special Commissioner of the Juries.

The Reports will be published in super royal octavo, to range with the one-volume Jury Reports of 1851. The price of the volume, bound in cloth, to Members of the Society of Arts, to Jurors, and Guarantors, is fixed at 10s.; to other persons, 15s. If bound in morocco, 7s. 6d. additional in each case.

Forms of application for copies have been issued to Members of the Society, to Jurors, and to Guarantors.

AWARDS OF MERIT.

The following circular has been issued; a copy will be furnished to any exhibitor on application to the Secretary of the Society of Arts.

Society for the Encouragement of Arts, Manufactures,
and Commerce,
John-st., Adelphi, London, W.C., Aug. 1862.

SIR,—The Council of the Society of Arts have decided to invite the opinion of the Jurors, the Commissioners for the Colonies and for Foreign Countries, and the principal

Exhibitors at the International Exhibition, on the question of Awards of Merit in connection with International Exhibitions; and I am directed by the Council of the Society of Arts to transmit to you the accompanying Queries, with a request that you will favour them with your views on the subject, it being the intention of the Council to embody the answers they may receive in a public Report:—

1.—Are you of opinion that Awards for Merit, by Medals or otherwise, in International Exhibitions, are desirable?

2.—State the reasons for your opinion.

3.—Ought Works of Fine Art and Designs to be excluded from the Awards?

4.—Can you suggest any better method than the appointment of Jurors for making the Awards?

5.—Can you suggest any improvement in the Constitution or proceedings of the Juries?

6.—Is any Appeal from the decision of Juries desirable?

7.—If you think Awards undesirable, can you suggest any other means by which meritorious productions may be brought to the notice of the public?

8.—Have you any further suggestions to offer on the subject?

It is particularly requested that any replies with which you may favour the Council may be sent not later than the 15th of September, and that they may be written on foolscap paper, on one side only, with an inch margin, and numbered corresponding to the number of the questions.

I am, Sir,

Your obedient Servant,
P. LE NEVE FOSTER,
Secretary.

NOTICE TO INSTITUTIONS.

The Programme of Examinations for 1863 is now ready, and two copies have been sent to each Institution in Union and Local Board. Additional copies may be had gratis on application to the Secretary.

The Papers set at the last Examination are now published in the form of a pamphlet, which may be had of Messrs. Bell and Daldy, Fleetstreet. Price Sixpence.

Those Secretaries of Institutions who have not already forwarded to the Secretary of the Society of Arts copies of their last Annual Reports, are requested to do so.

CONVERSAZIONE.

The third Conversazione of the present season will take place at the South Kensington Museum on the 8th October.

INTERNATIONAL EXHIBITION OF 1862.

VISITS OF SCHOOLS.

In the return published in the *Journal* for the 15th inst., the female students of the Schools of Design, eight hundred in number, who were admitted on half-crown days by tickets presented to them by Her Majesty the Queen, were not included.

INTERNATIONAL EXHIBITION OF 1862.

VISITS OF SCHOOLS (*Continued*).

The following is a continuation of the Return of Schools reported to Her Majesty's Commissioners as having visited the Exhibition, up to the 21st instant, inclusive :—

DATE.	FROM WHAT LOCALITY.	NAME OF SCHOOL.	BY WHOM SENT.	No. of Children from each School.	Total each day.
Aug. 4	Staines	British	Committee	25	37
" "	Eynsham, Oxon ...	Bartholomews	The Trustees	12	
" 5	Highgate	Night	{ Revds. J. Hulcombe and J. Beaumont ... }	17	701
" "	Wrotham, Kent ...	Choir	Rev. F. Lane	16	
" "	Chelsea	Duke of York's ...	Secretary for War ...	213	
" "	Temple Bar	Ragged	Managers	11	
" "	Lisson-grove	Do.	Subscription	22	
" "	New Brompton, } Chatham	Choir	Rev. A. Willis	22	
" "	Isleworth, Middlesex	British	Baroness Rothschild ...	20	
" "	Rochester	St. Peter's	Subscription	85	
" "	Chatham	St. Bartholomew ...		44	
" "	Roeampton	Parochial	Rev. Dr. Bibur	12	
" "	Banbury	British	Subscription	66	
" "	Kensington	St. Margaret's ...	Do.	34	
" "	Ravensden, Beds ...	Sunday	Do.	50	
" "	Stowe	National	Duke of Buckingham ...	11	
" "	Ship-yard, Temple } Bar	Shoe-black (red) ...	Committee	19	
" "	Crayford, Kent ...	St. Mary's	Mrs. Barnwell	59	
" "	Mile-end	Mile-end, Old-town ...	Committee	48	782
" 6	Farnham	National	Committee	39	
" "	Margaret-street ...	All Saints	Mrs. Byron	14	
" "	St. Albans	National	Rev. F. Lipscomb	205	
" "	Acton	Do.	Baron Rothschild	62	
" "	Abbots Langley ...	Do.	Subscription	100	
" "	Westminster	Grey Coat	Governors	207	
" "	Chelsea	Duke of York's ...	Secretary for War	26	
" "	Bishopsgate-street ...	Turners' Free	Governors	30	
" "	Bath	Blue Coat	Rev. C. Kendle	13	
" "	Gravesend	British	Subscription	38	
" "	Andover	Abbott's Ann	Hon. and Rev. S. Best ...	45	770
" 7	Lingfield, Surrey ...	National	Subscription	50	
" "	Tunbridge Wells ...	Do.	Do.	36	
" "	Bursted, Kent	Do.	Do.	66	
" "	Clapham-park	All Saints	Rev. John Scott	200	
" "	Clerkenwell	Parochial	Subscription	53	
" "	Hendon	British	Thomas Spalding, Esq. ...	31	
" "	Feltham	National	Subscription	96	
" "	Hampton	Grammar	Do.	22	
" "	Leytonstone	National	Committee	67	
" "	Southborough	Do.	Mr. Henry Crundwell ...	84	
" "	Bryanston-square ...	St. Mary's	Rev. R. Rutland	20	
" "	East Barnet	National	Committee	50	50
" 8	West Titherly, } Hampshire	National	Thos. Baring, Esq.	22	
" 11	Grove - road, St. } John's-wood	Female Orphans	W. Marshall, Esq.	12	111
" "	Ship-yard, Temple- } bar	Shoeblack	Committee	16	
" "	Horsham, Surrey ...	National	Do.	15	
" "	Bromham (Beds) ...	Do.	Hon. Misses E. & S. Trevor	46	
" "	Chichester	Blue Coat	Governors	15	
" 12	Eachfort (Wilts) ...	National	Lady Charlotte Taylor ...	33	
" "	Windsor	Industrial	Subscription	22	
" "	Paddington	St. John's	Hon. Mrs. Kinnaird	60	
" "	Guildford	McDonald's (Boys) ...	Major McDonald, R.E. ...	23	
" "	Hertford	Green Coat	Subscription	20	
" "	Horsell (Surrey) ...	National	Do.		

RETURN OF SCHOOLS (*Continued*).

DATE.	FROM WHAT LOCALITY.	NAME OF SCHOOL.	BY WHOM SENT.	No. of Children from each School.	Total each day.
Aug. 12	Woking	Academy	W. Ross, Esq.	11	366
" "	Ealing	British	Baroness Rothschild ...	168	
" "	Hanwell	Central London	Managers	14	
" 13	Seaford, Sussex ...	Sunday	T. Crook, Esq.	59	362
" "	Stamford-hill ...	Hermitage... ..	Chas. Shaw, Esq.	61	
" "	Tunbridge Wells ...	National	Rev. G. Woodgate	27	
" "	Edmonton... ..	Baptist	G. P. Bacon, Esq.	22	
" "	Maidstone... ..	Blue Coat... ..	Trustees	107	
" "	Broxbourne	Broxbourne	G. J. Bosanquet, Esq. ...	57	
" "	Spitalfields	Booth-street	Rev. J. Patterson	14	
" "	Slough	British	Jas. Startup, Esq.	15	
" 14	Winkfield	Evening	A. Gilliat, Esq.	32	370
" "	Willesden	Parochial	Subscription	124	
" "	Agar Town	Ragged	Mrs. Burchett	21	
" "	Wandsworth	British	Committee	73	
" "	Isleworth, Middlesex...	Do.	Baroness Rothschild ...	22	
" "	Hurst, Reading... ..	St. Nicholas (Choir)... ..	Rev. A. A. Cameron	7	
" "	Lancaster	National	The Mayor	80	
" "	Hanover District } Church }	Choristers	Rev. T. G. James	11	
" 15	Wood-green, Tot- tenham }	Royal Masonic	Subscription	61	61
" 18	Watford	National	Rev. W. L. James	87	
" "	Do.	Free	G. Rooper, Esq.	21	
" "	Franfield	National	Rev. E. Docker	21	129
" 19	Marlborough	Parochial	Subscription	45	
" "	Do.	Grammar	Trustees	40	
" "	Romsey, Hants. ...	Nowes's Charity	Trustees	25	412
" "	St. James, West- minster }	Workhouse	Governors	126	
" "	Brixton	St. Ann's Society	Subscription	79	
" "	Enfield	Industrial	Committee	32	
" "	Wade's Mill	National	R. Hautnay, Esq.	30	
" "	Burford, Oxon	Choir... ..	Rev. J. H. Burgess	11	
" "	North Mimms... ..	National	{ W. Campbell and R. } { W. Gawson, Esqs. }	24	
" 20	Fulham	Union	Subscription	73	361
" "	Bath	Forum	Committee	13	
" "	Kilburn	Private	Mr. Rollins	27	
" "	Camberwell	Missionary	Mrs. Benncker	16	
" "	Bolton-street, Ken- nington }	Sunday	Rev. C. H. Wyche	25	
" "	Westminster	Wesleyan College	J. R. Kay, Esq.	50	
" "	Pinner	Commercial Travellers' ...	Subscription	157	
" 21	Ditchling	National	Subscription	17	908
" "	Rochester	St. Nicholas	Do.	60	
" "	Knightsbridge	All Saints'	Do.	50	
" "	Paddington	St. James's	Committee	56	
" "	Ipswich	Christ's Hospital	Governors	20	
" "	Abingdon	Union	Do.	47	
" "	Paddington	Girls' Home	Mrs. A. Mills	27	
" "	City of London... ..	Farringdon Within	{ Alderman Phillips and } { Deputies }	120	
" "	Westminster	Wesleyan Training College	J. R. Kay, Esq... ..	20	
" "	St. Saviour's, South- wark }	Mrs. Newcomen's... ..	Wardens	223	
" "	New-cross, Deptford	Warehousemen and Clerks'	Committee	63	
" "	Hill-street, Dorset- square }	Cripples' Home	R. Broughton, Esq.	21	
" "	Westminster	Wesleyan	J. R. Kay, Esq.	20	
" "	Walthamstow	British	Mrs. Barclay	54	
" "	Hampton Wick	Sunday and Day	Subscription	110	

VISITS OF WORKMEN.

The following is a return of the number of workmen, mechanics, operatives, and others who have visited the building in parties, from June 9th to August 21st:—

DATE.	DESCRIPTION OF PERSONS.	FROM WHAT LOCALITY.	BY WHOM SENT.	NUMBER.
June 9	Workmen employed on the Building... }	Metropolis... }	Her Majesty the Queen ...	3,000
" "	Foresters ... }	Town and country ... }	Subscription ... }	14,000
" 12	Workmen ... }	Westminster ... }	Mr. Cochrane ... }	150
" "	Operatives... }	St. Martin's-lane ... }	Messrs. Richards ... }	200
" 19	Insane Females... }	Camberwell ... }	Dr. Armstrong ... }	80
" 23	Naval Reserve ... }	Blackwall ... }	Capt. Lacy and Officers. ... }	250
July 1	Workmen and Families ... }	Britannia Iron Works ... }	Messrs. H. and F. Howard... }	850
" 5	Cotton Spinners }	Bradford ... }	W. E. Foster, Esq., M.P. ... }	545
" 20	Men, Wives, and Children of the 31st Depot ... }	Chatham ... }	Capt. Prevost }	200
" 22	Shipwrights ... }	Blackwall ... }	Messrs. Mare and Co. ... }	2,000
" "	Paper Makers ... }	Woburn, Bucks ... }	Messrs. Thomas ... }	64
" "	Men, Wives, and Children of the 52nd Regiment ... }	Chatham ... }	Capt. Henley ... }	85
" "	Men, Wives, and Children of the 83rd Regiment ... }	Do. ... }	Capt. Pickett ... }	90
" 29	Operatives... }	... }	Messrs. Watts and Son ... }	152
" "	Do. ... }	Chatham ... }	Government ... }	2,000
" "	Cavalry ... }	Maidstone... }	An Officer ... }	50
" "	5th Lancers ... }	Kensington ... }	General Chatterton ... }	50
" "	60th Rifles... }	Aldershot ... }	Capt. W. F. Carlton ... }	51
" 30	Villagers ... }	Cuckfield ... }	Subscription ... }	550
Aug. 1	Aged Poor ... }	St. Giles's Workhouse ... }	Guardians ... }	100
" 4	Biscuit Bakers ... }	Ratcliffe-cross ... }	Messrs. Perkin and Salmon... }	40
" "	Mechanics... }	Turin... }	Government ... }	36
" "	Parishioners ... }	Claypole, Lincolnshire ... }	Subscription ... }	38
" 6	Operatives... }	Bury, near Birmingham ... }	Albright and Wilson ... }	95
" 7	Female Servants ... }	Paddington ... }	Hon. Mrs. A. Kinnaird ... }	10
" "	Clothworkers ... }	Stanley Mills, Strood ... }	{ Messrs. Marley and Stra- han ... }	960
" "	Workpeople ... }	Bristol ... }	Messrs. Derham, Brothers ... }	700
" "	Middlesex Volunteer Engineers ... }	Tower Hamlets... }	Capt. Bental ... }	100
" 11	Workpeople ... }	Strood ... }	{ Messrs. Roberts, Gowing, and Co. ... }	300
" "	Excursionists ... }	Vienna ... }	Subscription ... }	352
" "	Workmen ... }	Canterbury ... }	Smith Bell, Esq. ... }	21
" "	Workpeople ... }	Woburn, Bucks ... }	A. Gilbey, Esq. ... }	81
" 13	Lascar Seamen... }	Ship "Brandon" ... }	Owners ... }	34
" "	Tanners ... }	Guildford ... }	Messrs. Bink and Co. ... }	13
" "	Villagers ... }	Balcombe, Sussex ... }	{ J. J. Hankey and — Ro- binson, Esqs. ... }	97
" 14	Workmen ... }	Phoenix Gas Company ... }	The Directors ... }	600
" "	Tanners ... }	Bristol ... }	Messrs. Evans and Co... }	60
" "	Brushmakers ... }	Do. ... }	Messrs. Brison and Co... }	60
" 18	Workpeople ... }	Bromley ... }	Harper Twelvetrees, Esq. ... }	450
" 19	Military Train ... }	Woolwich... }	The Officers ... }	27
" 20	Workmen ... }	City-road ... }	Messrs. Pitt and Co. ... }	60
" 21	Needlewomen ... }	Abingdon ... }	{ Messrs. Hyde, Son, and Clark ... }	960

PRODUCTS OF NATAL AT THE INTERNATIONAL EXHIBITION.

The following information, in reference to some of the products of this colony, is taken from the Descriptive Catalogue, by Dr. Mann, F.R.S.A., Hon. Secretary to the Natal Commission:—

In the year 1850 Mr. George Marcus manufactured a specimen of sugar in Natal, with a pair of rude wooden rollers and a common cooking pot, from green Natal canes, purchased from a Kafir. The specimen was taken

down to Durban and exhibited as a curiosity. About the same time Mr. Moorewood introduced a superior quality of cane. In the present year sugar mills are established entirely along the coast, from the Nonoti to the Umzinto. There are now plantations at the Umtata and Pesang Rivers, at the Umhlali, at the Tongaat, and the Umhloti, on the flats between that river and the Umgeni, round the mouth of the Umgeni; at the Umlaze and Isipingo; at the Umkomanzi, and between the Umkomanzi and the Umzinto. During the last two years, close upon 2,600 tons of sugar, of a value exceeding £50,000, have been

exported from the colony, besides the very large quantity consumed by its own population. The twelve specimens exhibited, drawn from the Umzinto, the Umkomanzi, the Isipingo, the Umgeni, the Umhloti, and the Umtata, satisfactorily show the quality that can already be produced by the planters of Natal. The coast-climate and coast-soil are alike eminently calculated for the growth and manufacture of this most valuable export. The only drawback at present experienced is the occasional influence of frost in certain low-lying and damp localities. The hill sides appear to be free from this visitation, which, however, seems to affect the quantity more than the quality of the produce.

The climate of Natal proves to be admirably adapted for the production of arrowroot. The moist summer, dry sunny winter, and abundance of clear running streams, are all circumstances favourable to its growth and manufacture. During the last two years, the unusual prevalence of drought, and the low price of the commodity in the English market, have tended to withdraw the attention of settlers from its cultivation. Not less than six thousand hundredweights, of a value exceeding eleven thousand pounds sterling, have nevertheless been exported from Natal during the last two years. The fine specimens furnished to the Exhibition are all of the last year's manufacture.

Coffee is now grown successfully in three or four localities in the neighbourhood of Durban. It thrives in a red soil of frequent occurrence on the landward side of the coast hills. The cultivation proves to be exactly adapted to the peculiarities of the coolies recently introduced into Natal from India. There are altogether something approaching to two hundred acres of land under coffee plantation at the present time, with a prospect of producing, at existing prices, in the Natal market, a return of from £25 to £50 per acre per annum. Coffee already planted promises to yield, under skilful management, in Natal, an income of something like four thousand pounds a year, upon an investment of sixteen thousand pounds.

Wheat is successfully grown on the high lands above Maritzburg, but cannot be produced to any serviceable extent upon the coast. It is, however, not without antagonists, even on the high lands, arising out of the wetness of the summer season. The Dutch farmers (boers) send a large quantity into the markets. The home demand is almost entirely supplied by colonial agriculture; but at certain seasons the price is liable to be greatly enhanced in consequence of the uncertainty of the supply, and of the constant influx of fresh mouths by immigration.

Barley of the finest quality can be readily grown on the uplands, but at present it is not put to any particular use within the colony. Oats are sown in large quantities around the towns, but are principally cut and employed in the straw for forage. Only small quantities are harvested and threshed. In the neighbourhood of Durban and Maritzburg, large sums of money are made by the growth of forage. Most lands yield two crops of them in the year. The tract of country in which the English grain crops thrive, lies at an altitude of between two and four thousand feet above the sea, where there is a mean temperature for the year of about 65°, but where frost is occasionally seen in winter time.

The maize flourishes everywhere throughout the colony. It is grown by the Kafir, as well as by the white colonists, in the greatest abundance. Every kraal has its mealie garden. The yield is exceedingly large, and it need be so, as it is the staple food of the Kafir throughout the land, as well as a common addition to the table of most white colonists, the average daily allowance of mealie meal for a Kafir being three pints. An acre of ground readily furnishes eleven muids of three bushels each. The mealie crop always commands a ready sale in the market. The price fluctuates between ten and twenty shillings the muid, according to the season, and after

long drought rises even above this. During the year 1861 mealie meal was sold at forty-seven shillings the muid in Maritzburg market.

The capsicum grows readily from Maritzburg to the sea, and is cultivated near Durban for commercial purposes. The Natal Cayenne pepper is of unquestionable excellence. Fifty-four hundredweights of chilies, worth £170, and twenty hundredweights of cayenne, worth £125, were exported last year.

Natal grows its own grain food, and looks to export sugar, arrowroot, and coffee. It has actually sent out of these food staples, in the last two years, value exceeding sixty-two thousand pounds. It also produces excellent bacon, hams, and biltong, which are nearly always to be obtained in the market. Its butter is chiefly the produce of the higher lands, and for the present is abundant, rather than choice, the manufacture being for the most part in the hands of the Dutch farmers. Besides the supply of the large and increasing demand of the colonial market, six thousand hundredweight, worth nearly thirty-four thousand pounds, have been exported in the last two years.

In the matter of vegetables the colony is exceedingly well off, or rather will be so, when men have leisure to give their thoughts to garden luxuries. The sweet potato, the underground tuber of a convolvulus, is perhaps the most important of the vegetable products, on the whole. It grows everywhere, and, under the most favourable circumstances, attains to an enormous size. It contains a large proportion of both starch and sugar, and is a constant article upon the tables of most colonists. The potato is grown in perfection in Maritzburg, and on the higher lands. The turnip and the carrot are common in gardens; the former is grown by Mr. Aldborough, an old Norfolk farming-man, settled some thirty miles to the west of Maritzburg, in a state that would do no discredit to old Norfolk lands. Peas and beans are furnished in the capital. The cucumber, gourd, melon, pumpkin, onion, and tomato, are found in every garden, in the highest luxuriance. A single bed of pumpkins, at Maritzburg, will fill a small room with its produce in a single year. In the gardens of the coast the banana, the papaw, pineapple, mango, guava, orange, natji, lemon, citron, and lime, tamarind, custard apple, Brazilian-cherry, rose-apple, and sour-sop, ripen with the greatest ease. The pineapple is almost as common as turnips in England. At Mr. Brander's, at the Umzinto, and at the American mission station, Mapumulo, in the Umvoti, oranges and natjis, a variety of the mandarin orange, are grown in waggon-loads, and are of the choicest quality. The orange is also very abundant in the warm valley of Weenen, some seventy miles from the sea, and some two thousand eight hundred feet above its level, where the groves bear already in great luxuriance, on account of this having been one of the earliest spots settled by the Dutch. The granadilla, the fruit of a small hardy species of passion-flower, is in every garden, from Maritzburg to the sea, and ripens its delicious fruit through six months of the year. The combined sharpness and fragrance of this abundant fruit render it exceedingly welcome through the season of greatest heat. It is no small tribute to its excellence to say, that it is only the new palate that can tolerate the addition of sugar and wine to its juice. The white mulberry grows both at Maritzburg and on the coast, like a weed, and with incredible luxuriance, furnishing the housekeeper with crops of very agreeable and wholesome fruit for two or three months at a stretch. The yellow peach is produced in such abundance at Maritzburg, and the Dutch homesteads of even the up-country, that in some localities pigs are fed for weeks upon it, and orchards may be seen literally paved with the stones of the fruit that have fallen unplucked, and rotted upon the ground. It requires a Dutch taste to appreciate this fruit in its raw condition, but it is a most estimable and wholesome substitute for the English plum in cookery, being of less luscious but of more delicate

flavour. The free-stone peach, the apricot, the nectarine, and the pear, ripen at Maritzburg. The apple is making a more frequent and a better appearance year by year, as Mr. Pinnemore, an experienced horticulturist, of Maritzburg, is giving his attention particularly to its cultivation. The fig, the grape, the medlar, and the pomegranate, are common in the gardens of Maritzburg. The raspberry and the strawberry may be ripened at Maritzburg, but they require considerable skill and care, owing to the frequency of the rains at the period of ripening. The loquat, a most delicious little fruit of a plant of the apple tribe, is found from Maritzburg to the sea. The over-praised and rank-flavoured Cape gooseberry, the fruit of a plant of the deadly night-shade tribe (*Physalis pubescens*), seizes upon waste land round dwellings, much as nettles and docks do in England, and is much esteemed. In addition to this long list, there are four other fruits so peculiar as to deserve a particular nook to themselves. One of these is known locally under its Kafir name, the Amatungulu, or, as it is more commonly called, the 'martingula.' It is also not unfrequently distinguished as the Natal plum. It is not a plum, however, but the stoneless fruit of the *Arduiana grandiflora*, a very pretty shrub, with glossy evergreen leaves and stout tri-forked spines, nearly allied to the blue periwinkles (*Vincas*) of England. The fruit looks like a purple plum when ripe, and has a milky juice of a fine acidulous flavour. It is only found in the neighbourhood of the coast, but is there cultivated largely for fences, and is much used in the production of a coarse kind of jam.

The Amatunduluka is a coast fruit well known to the Kafirs, but not yet to the white settlers. The Indian sorrel is a kind of mallow (*Hibiscus sabdrassa*), whose floral leaves yield an acidulous, and at the same time mucilaginous juice, which is easily converted into a fine red jelly, when the leaves are boiled in sugar, and the syrup is thickened to the necessary degree. The Indian sorrel jelly is no contemptible substitute for red currant jelly. But that favourite adjunct of mutton and venison is still more nearly approached, by a compound formed from a fruit originally brought from the Kei river, beyond the St. John's, and therefore called the Kei apple. This apple is the fruit of a species of ebony (*Diospyrus*), and is so acid, that it is used by the Dutch as a pickle without vinegar. The Kei apple, too, is a robust and evergreen shrub, armed with formidable spines. It is now extensively grown in and near Maritzburg, as a valuable garden fence.

In connection with the food-substances produced in Natal, tea deserves a passing notice. Some years since a few Assam plants were introduced by Mr. Plant, the Curator of the Botanic Gardens of Durban. After the death of Mr. Plant, his widow removed these plants to her new residence in the Umvoti. There they have so flourished and multiplied, that there are now some hundreds of their descendants, five feet high, and in the most healthy condition. The specimen of tea was prepared from these plants in a rude way. It has the full green-tea flavour, somewhat too strong, possibly on account of its newness and the rudeness of the process followed in its preparation. The shrub which produces Bushman's tea, *Catha edulis*, grows in the gardens of Maritzburg. This is the khât of the Arabs, employed by them as a nerve stimulant, and to cause wakefulness.

Among the raw materials serviceable to commerce and the arts, produced in Natal by animal life, mention may be first made of the spoils of the ox. South Africa has been, from the earliest portion of its civilized history, essentially a pasture land. The original Dutch inhabitants have always been surrounded by large herds. Not very long since the value of an ox was something like a pound. Recently considerable ravages have been made among the herds by the appearance of epidemic lung sickness. This, in connection with the enormously increased demand for ox flesh for purposes of land transport, has largely augmented the price of the animal in the

market. Twenty-five thousand hides of the ox and the buffalo, worth nearly ten thousand pounds sterling, were exported from Natal in the past year, the greater part of which came down from the Dutch states beyond the Drakensberg. The vast horns of the Basuto, or Macateese ox, a long-legged animal, are shown, whose head quarters are in the land of Moshesh, beyond the Drakensberg frontier, but not of much value in the colony; also the horns of the Fatherland ox, originally imported from Holland, and in high esteem for milking and for meat. The horns of the buffalo are brought down from beyond the mountains in considerable quantity; the animal is still occasionally seen in the higher lands of Natal.

The sheep thrives in many parts of the Natal uplands, and in the free states beyond, and is now being gradually introduced into the lower region, around the capital, with varying degrees of success. Gentlemen who have had large experience in the management of sheep in other lands, are turning their attention to its care, in the conviction that when proper attention and skill are devoted to the object, and when the sheep are hurdled and fed on the hill tops, and kept clear from scab, which has hitherto been entirely disregarded in the colony, mutton and wool will be remunerative even in these lower localities. At any rate, mutton, which was never seen on the tables at Maritzburg three or four years since, is now regularly supplied by the butchers in unlimited quantity at sixpence per pound. In the year 1861 about 650,000 pounds of sheep's wool, worth £33,000, was exported from Natal; much of it, of course, being the produce of the Overberg states. There are samples of Umvoti-grown wool, furnished by Mr. G. Baker, of Maritzburg, a gentleman who has given much attention to the improvement of sheep farming in the colony. There are also samples from the Nodessberg; from Richmond, twenty miles south of Maritzburg; from the hills immediately above Maritzburg; from the heights between the Umgeni and Mooi rivers; and from the banks of the Mooi river, forty miles north of Maritzburg.

There is another large group of herbivorous ruminants which is of great interest in Southern Africa, on account of the meat it affords and of the spoils it yields. This is the family of the antelopes, or bucks, as they are more familiarly called by hunting men. The flesh of the antelope is the venison of South Africa, and many forms of this venison are still common enough in Natal, although as the ruminants of civilization, oxen and sheep, increase in a land, the antelopes observe the inverse proportion, and diminish in number. The antelopes constitute the herds of the wilderness. The spring buck, which yields the mat and caross, is the beautiful leaper of the high plains; it does not descend into Natal, but exists on the more elevated grounds in countless numbers. These antelopes have received their name from the habit of leaping perpendicularly upwards of six or seven feet when alarmed, showing, in the act, remarkable snow-white folds of skin which run from the middle of the back to the tail. The Dutchman of South Africa draws upon the skin of this animal for his carpets. The pallah, or roode buck (red buck), also confines itself to the upper regions beyond the Berg; it is a beautiful animal, standing three feet high, with irregular, lyrate-ringed horns. It is a sort of first cousin of the spring buck, occasionally leaping in the same way when excited, but generally not more than six or eight individuals are found in company. The ourebi, whose horns are shown, is a red animal, weighing about thirty pounds, and somewhat resembling the hare in its habit of squatting close upon the ground, and starting up almost under the horse's feet. It runs in circles, and dwells on the open plains. It is spread all over the colony of Natal. The duiker buck is a dark grey antelope, somewhat smaller than the ourebi, which affects the habits of the rabbit rather than of the hare, lives in cover, and runs into the open when started from its shelter. It receives its name from its habit of diving into the foliage where it lurks. It, too, is abundant in Natal. The small blue buck is a very beautiful little creature, of a grey

colour, and not much larger than a good-sized hare. It dwells in the thick bush, and is abundant throughout the wild covers of the colony. It is well named the *Cephalopus pygmaea* by learned men. The ree buck is the chamois of South Africa, and is found in plenty on the Natal hills, where it places sentinels, and is difficult to surprise. It runs along the hill sides with a swift gliding motion, altogether different from the bounding gait of most of its fraternity. The reed buck is a fawn-coloured animal, of considerable size, weighing from eighty to one hundred pounds, and haunting swampy covers of reeds and high grass, either on the banks of running streams, or in the beds of exhausted water-courses. It is a slow runner, and squats until the hunter is near, and therefore is considered easy game. It is common in Natal. The red bush buck is a bright red-bay antelope, which frequents the dense bush-covered ground of the coast.

The spring buck, pallah, ourebi, duiker buck, blue buck, ree buck, reed buck, and red bush buck are all true antelopes; that is to say, they are slim, graceful animals, of great lightness and symmetry. The stag antelopes, on the other hand, have heavy bodies and larger dimensions, and commonly carry a considerable development of horn. Of these, five species are found on the high plains to the north of Drakensberg, but not in Natal. The water buck, or kringat buck, lives upon the banks of the larger rivers, and seeks safety when disturbed by rushing through them to the opposite bank. The blue buck is an antelope of the high plains, with a black skin seen shining through ashy-grey hair, with large recurved horns, and with a body six feet long. The sable antelope, Zwartwitpens buck, is a very beautiful beast, with a black body and white belly, and with a white face streaked with black. The gems buck (*Oryx gazella*) is a renowned warrior; perhaps the most gallant combatant of his tribe. With his formidable straight horns he defends himself bravely whenever he is attacked, and has been known to beat off even the lion upon occasions, whence he has earned for himself the familiar sobriquet of "lion killer," by which he is extensively known. His first-cousin, the oryx, or *Oryx leucoryx*, is scarcely less beautiful, and in one particular as renowned as himself. It is believed to be the unicorn of the Egyptian monuments.

Of the bovine, or ox-antelopes, still more bulky than the stag-antelopes, four are seen in Natal. The hartebeest, is a magnificent animal, weighing as much as three hundred and fifty pounds, which inhabits the open plains, where it grazes, and runs hard when disturbed, having first taken a fair and cool gaze at its antagonist. The hartebeest comes, in winter time, within five hours' ride of Maritzburg, and may always be seen at that season on the Umvoti flats; the bastard hartebeest is only encountered in the high Karoos. The bless buck, so called from having a white blaze down its body, is met with in Natal, just beneath the Drakensberg, in the three coldest months of the year, and then almost always has the lion in attendance. The bush buck, or bush ram, is a Natal buck, of about the same size as the reed buck. It lives under cover, and shows fight when it is brought to bay, barking like a dog, and not unfrequently proving itself a formidable antagonist from the length and strength of its horns. The hartebeest, fine as it is, is altogether eclipsed by another species of this bovine family, which comes down the Berg into the uplands of Natal in the cool months of July and August—this is the eland. The eland is a heavy feeder, and enjoys a dignity of its own among the antelopes, in its habit of growing fat. A full-grown bull will sometimes weigh as much as a thousand pounds, and falls with a crash when it is struck by the hunter's lead. The fat eland is naturally a slow runner; what it gains in portliness it necessarily loses in agility and speed. The Dutch hunter avails himself of this peculiarity in making the slow creature carry its own ponderous weight to the larder. He leisurely trots his game before him until he is in the neigh-

bourhood of his homestead, and then brings it to the ground. There is a slight spiral twist in the horns of the eland, which are more remarkably developed in another antelope nearly allied to the eland, but never seen in Natal. This is the unquestionable prince of the tribe. The koodoo does not fatten like the eland, but it stands four feet high and is eight feet long. It has the stature of a little horse. It is a good swimmer, and lives upon the banks of the large upland rivers. The horns are four feet long, and twisted through two spires and a half. They are so heavy that they are usually carried couched along the back when the creature is in motion.

The horse antelope, the wildebeest, or gnu, is seen in the Overberg plain, in herds of countless numbers, coursing along in single file, and plunging and kicking, with its tail extended in the wind. This curious creature, which combines the dilated nostril and flowing mane and tail of the horse with the horn and cleft hoof of the ox, is the armorial emblem of Natal. On this account it is a pity that it does not combine the ovine wool as well as the bovine horn, with the horse hair. It then might have been hopefully looked to as a Natalian augury as well as a Natalian emblem. The zulu wildebeest differs considerably from the wildebeest of the Dutch free states.

The giraffe is now never seen, except far up in the interior. The only appearance it enters in Natal is the thick camel leather which it sends down for the soles of Dutchmen's shoes, an article that belongs, however, to manufactured substances rather than raw material.

The thick skinned, non-producing group of quadrupeds is unquestionably next in importance to Natal in a commercial and economical point of view. The elephant is still plentiful in the thick wild bush along the Tugela, and is in great force in the land beyond the Drakensberg, whence he still sends down his spoils in abundance. It is only upon very chance occasions he strays nearer to white settlers, and when he does so, is quite sure to get an immediate notice to quit. In the year 1861 seventy-five thousand pounds of ivory, worth nearly twenty-three thousand pounds sterling, was shipped from Natal. The bull-tusks exhibited by Messrs. Dickinson Brothers, of Natal, are fine specimens of their class. The tusk exhibited weighs 126 English pounds, and is the largest specimen that came down to Natal during the past year. The rhinoceros is only seen about the banks of the inland rivers; but it must still be very plentiful, to judge from the number of its horns that enter the colony. Every store abounds with specimens of them. Twelve hundred horns, worth six hundred pounds sterling, are exported annually from Natal. Very fine specimens of the horn of the black rhinoceros are shown. Most of the African rhinoceroses have two horns arranged as in the one double specimen exhibited. The horns are solid appendages, and are fixed upon strong arches of bone provided for their attachment; the foremost upon the nasal bones, and the hindmost upon the frontal bone. The rock rabbit (*Hyrax capensis*), probably identical with the cony of scripture, is a curious little animal, half packyderm, half rodent, which lives in families in the crevices of rocks, and feeds upon herbage and young vegetable shoots (*Phacochaeres*). The African wild boar is a large animal living in the bush, and occasionally weighing as much as 180 pounds. It very much resembles the wild boar of Europe. A smaller pig, known as the prairie pig, is only found in the open veldt; it is a more active animal, and much valued for pork. The sea-cow or river horse (hippopotamus), half-elephant, half-pig, is still abundant in many parts of the colony. There are preserves of it within an easy ride of both Maritzburg and Durban. Its tusks furnish a very valuable kind of ivory. The quagga (wild ass), the South African representative of the solid-hoofed packyderm, and the zebra, come down the Drakensberg into the Natal uplands, with the bless buck and the wildebeest, during the three coldest months of the winter, when the higher plains are without herbage. The horse is, of course, bred with considerable care in Natal. Of late

years its value has been greatly enhanced by improved breeding, as well as by the prevalence of epidemic lung diseases at certain seasons. The higher grounds are considered to be the least liable to its ravages. There are spots in the colony which have hitherto escaped the visitation. Large troops of horses are continually supplied to Natal from the Dutch states. Forty-eight horses have been exported from Natal in the last two years.

The carnivora are numerous in Southern Africa; but by universal consent of white settlers are held to be minus quantities, rather than plus, in the economical and commercial account, notwithstanding the large prices that are now obtained in the market for their beautiful skins. They are very unmanageable and unreasonable in the matter of diet. The head of a lion exhibited exemplifies this, for during a brief visit at the close of last year to the neighbourhood of Pretoria, in the Transvaal States, he slaughtered seven oxen without asking the leave of the owners. He was retributively shot by a spring-gun, baited with the remains of one of his victims. This head belonged to a maneless variety of great ferocity, not uncommon in the Transvaal States. The black-maned lion is a comparatively gentle and gentleman-like beast, and more easy to entertain. The lion is still abundant in the Transvaal States, and comes down into the remote upland of Natal in mid-winter with the herds of quaggas, wildebeests, and bless bucks that are then driven by thousands to seek pasture under the Drakensberg. Upon rare occasions some extraordinarily enterprising individual pushes a rapid raid through the more settled districts, levying a passing tribute, and returning to the mountains, if not intercepted, in its retreat. The panther and leopard are more commonly encountered in Natal. They occasionally make for themselves lairs in the inaccessible bush, whence it is exceedingly difficult to dislodge them, and drop upon animals passing beneath the trees where they lurk, or visit neighbouring herds by night. They too, are, however, much less abundant than they are beyond the frontier. All varieties of the leopard are "tigers" among the Dutch. The tiger cat is found all over the colony, as well as beyond the Berg. The grey cat (*Chaus silveus*, Isingquai of the Kafirs), is probably the chaus caffre, a kind of lynx; the rooi cat of the Dutch is undoubtedly a lynx (the *Caracal melanotis*); the silver jackal is a fox (the *Vulpes caama*). The skins of all these animals are highly valued by the Kafirs, as articles of ornament and dress; and deservedly so, for they are very beautiful objects. Many of them fetch higher prices in the Kafir market than they do in the white settlers' stores below. The carosses formed from the skins of these animals are manufactured by some of the native tribes of the interior, and are admirably prepared. The inner surface of the skin is cleansed by elaborate rubbings with a kind of clay, or fuller's earth, and all the rents in the fabric are carefully pieced with suitable fragments; the skins are sewn into the caross by the tendons of animals. The Kafirs have a gaunt ugly breed of dogs, which they employ in the chase; most probably a cross with the wild hunting dog of the prairies (*Lycan pictus*). There are several kinds of hyenas in the colony, all "wolves" among the Dutch, and all persecuted, perhaps more than they deserve to be, if due consideration be given to their scavengerial services. The otter is found on the banks of the rivers. Of the civet tribe, the Umhlangwane and Umvuzi of the Kafirs are ichneumons; the insimba is a musk-cat; the toothless insectivours (*Edentata*), have in Natal the isinkwe of the Kafirs, which is a lemur; the scaled manis, or pangolin, and the great furry ant bear, which is very common, as most horsemen can testify to their cost, the ground being in many places literally honey-combed by its burrows, although the creature is very rarely seen, on account of its nocturnal habits.

Among the rodents, the ubiquitous mice and rats are, of course, found in Natal in due plenty. There is a kind of dormouse, which makes itself very much at home in houses, and which would be very interesting if it were

less meddlesome and destructive. The porcupine is seen not uncommonly. The ivondwe of the Kafirs is the ground rat (*Aulacodus Swinderianus*), a member of a subdivision of the porcupine tribe, which is gaining for itself an unenviable species of notoriety, on account of its fondness for sugar cane.

The ostrich is still encountered in large flocks on the high inland plains north of the Drakensberg. It is only seen in Natal when it marches down by the side of some ox waggon, on its way to a life of captivity in England. The feathers of the ostrich are constant exports. In the year 1861, one hundred and ten pounds, worth £564 sterling, were shipped by the merchants of Natal.

(To be continued).

ELECTRIC ENGRAVING MACHINE.

This machine, shown in class VII. of the International Exhibition,* is used for engraving the cylinders of copper or brass, employed in the printing of woven fabrics and paper hangings.

Its great distinctive feature—apart from its general mechanical arrangements—is in the application of voltaic electricity in communicating certain necessary movements to important and delicate portions of the apparatus.

The cylinder to be engraved is first coated on its outer surface with a thin film of varnish, sufficiently resistant to the continuous action of the strongest acids. The requisite number of copies of the original design are then traced or scratched simultaneously by a series of diamond points which are arranged on the machine, parallel with the axis of the cylinder. Each diamond point is in correspondence with a small temporary magnet, and the entire series is so arranged *en rapport* with the original design, which had been previously etched on a metal cylinder filled in with a non-conducting substance (this cylinder being made to revolve in contact with a tracing point), that when the electric current passes, intermittent currents are established, whereby the diamonds are withdrawn from their work at the proper intervals. The metallic surface is thereby exposed in certain parts, and a bath of nitric or other acid being afterwards used to etch or deepen the engraved portion, the operation is completed.

Amongst other special advantages said to be derived from the use of this apparatus, the facility with which engravings may be enlarged or diminished to any necessary extent from the same original, is not the least important.

SOCIETY OF SCULPTORS OF ENGLAND.

At a meeting recently held at the rooms of the Architectural Society in Conduit-street, James Edmeston, Esq. in the chair, the following resolutions were passed:—

"That a society be formed to be called the Society of Sculptors of England, which shall have for its objects—

1. To exhibit annually the works of its members.
2. To include amongst its members not only professional sculptors, but also amateurs, patrons, and well-wishers of art; and
3. To correspond with other Societies interested in the welfare of art, from whom some substantial assistance may be expected."

"That the Society consist of a president, vice-presidents, council, and members, with honorary secretary, treasurer, and auditors; and that the Council be authorised to enrol members and to settle the rules of the Society. The subscription to be fixed at one guinea per annum."

The reasons given by the promoters for the formation of this Society are, "that there are few places in London where sculptors are afforded the opportunity of exhibiting

* Messrs. York and Co., Proprietors.

annually the products of their skill. The Royal Academy, the South Kensington Museum, and small spaces in the British Institution and Suffolk-street Galleries comprise the whole. The painters are splendidly lodged, the architects have their Institution, but the sculptors who really ought to hold the first rank in the fine arts, are condemned to a comparative obscurity, and generally speaking their productions are to be found in their studios, instead of the places to which their merits should entitle them. This neglect might have been tolerated years ago, when the number of sculptors in this country was comparatively limited, but now that they may be reckoned by hundreds, and the patrons and lovers of the art by thousands, it is high time that sculptors should take a step in the right direction, and by asserting their independence as a body entitled to an annual exhibition of their own, to offer on the one hand to the aspiring artist that opportunity of displaying his talents which he has for years ardently but vainly desired; and on the other, to open up to all classes of the community the means of obtaining works of art, of a sterling character, at a moderate expense.

"By thus entering into friendly rivalry, and subjecting their works to the test of public criticism, great advantages would accrue not only to the sculptor himself, who would be encouraged in the pursuit of his high vocation, but also to society at large, whose taste would thereby receive further development, being led by new paths to the contemplation of objects embodying the first principles of beauty, sublimity, and truth."

It is proposed to open an Exhibition on or before the 1st of April, 1863, which is to continue open for three months.

EXAMINATION PAPERS, 1862.

The following are the Examination Papers set in the various subjects at the Society's Final Examinations, held in May last :—

(Continued from page 609.)

LOGIC AND MENTAL SCIENCE.

THREE HOURS ALLOWED.

All candidates should attempt six Logic questions, answering a part at least of question No. 4; and three questions in each of the other books which they have studied.

LOGIC.

1. Explain univocal, equivocal, and analogous nouns, with examples.
2. Is logic an art or a science? Give your reasons.
3. Define the following words, mentioning in each case the kind of definition employed :—Music, right, fortress, idleness, oxygen, art.
4. Draw out in proper form the following arguments, and examine their correctness :—
 - (a) If virtue is voluntary, vice is voluntary; virtue is voluntary, therefore so is vice.
 - (b) Warm countries alone produce wines; Spain is a warm country, therefore Spain produces wines.
 - (c) There will be no dew, for the night is too cloudy.
 - (d) Gold and copper are very ductile, therefore this is a property of all metals.
 - (e) Arsenic is a poison, therefore it ought not to be used in medicine.
 - (f) What happens daily is probable; now, most unlikely things happen every day, therefore they are probable.
 - (g) Harvey might expect to be persecuted for his discovery of the circulation of the blood, because Galileo was for his discovery.
 - (h) A question cannot be a logical proposition, for it does not affirm or deny.

- (i) He committed the murder, for he had a gun in his hand, lately discharged, and was near the place, and quarrelled with the murdered man last week.

5. What is abstraction? Can there be abstraction without generalisation?
6. In what way does language abridge the process of thinking?
7. Show that Induction and Example are really syllogistic.
8. What faults of thinking does Logic profess to guard against, and what does she decline as beyond her range?
9. Explain the various kinds of Definition. When is it permissible to use the less perfect kinds?
10. Can inferences be drawn from one proposition? What can we infer from "All gases are compressible."?
11. What are hypothetical propositions? Can you show how they resemble categorical propositions?
12. What is the argument from analogy? Give one or two examples.
13. Mention some of the principal fallacies.

PALEY'S MORAL PHILOSOPHY.

1. It is not useful, and therefore it is not right, to rob a miser and give his money to the poor. Prove this.
2. What are the public benefits of the institution of property as to plenty, peace, and convenience?
3. What kinds of promises are not binding? Illustrate with examples.
4. Prove the unlawfulness of drunkenness on Paley's principles.
5. What is the theory of a "social compact," and what are the errors in it? What is Paley's own theory of civil government?
6. How does Paley reconcile the search after what is expedient with obedience to the will of God? What is the presumption, or postulate, by which the two are reconciled?
7. What are the objections usually brought against Paley's system?

BISHOP BUTLER'S SERMONS.

1. What is the distinction between the power and the authority of a principle?
2. What rules does Butler give for the control of the tongue?
3. "Hobbs defines pity as the imagination of calamity to ourselves, proceeding from the sight of another man's calamity." What is the fallacy of this view?
4. How is it shown that self-love and love of our neighbour are not necessarily irreconcilable?
5. Give a short sketch of the system of morals in Butler's Sermons.
6. Analyse briefly the Sermons on Human Nature.
7. Compare Butler's system with any other with which you are acquainted.

STEWART'S PHILOSOPHY OF THE HUMAN MIND.

1. How far do a man's "habits of thinking" influence the laws of association of ideas in his mind? Give illustrations.
2. What account does Stewart give of systems of "Artificial Memory?"
3. "The apparent coldness and selfishness of mankind may be traced in a great measure to a want of attention and a want of imagination." Explain this.
4. What are the principal uses of the study of the Philosophy of the Human Mind? State from your own knowledge the common objections to the study.
5. What is the connexion between memory and the association of ideas?
6. Give a short account of Nominalists, Realists, and Conceptualists, from Stewart's work.

BACON'S NOVUM ORGANUM.

1. What is Bacon's purpose in this work?

2. What are the *idols of the mind* of which he complains?
 3. What is Bacon's estimate of ancient philosophy, as gathered from the *time* when it took its rise, the *effects*, the *progress*, the *confessions of the authors*, and the *discord amongst them*?

4. What encouragement does Bacon draw from obvious inventions that have been overlooked until the inventor appeared? Give examples of such inventions.

5. "Nature is only subdued by obeying her; and that which in contemplative philosophy corresponds with the cause, in practical science becomes the rule." Explain this.

6. How does Bacon describe the right and the wrong ways of investigating truth?

LATIN AND ROMAN HISTORY.

THREE HOURS ALLOWED.

SECTION I.

Translate—

Nil me fatalia terrent,
 Si qua Phryges prae se jactant, responsa deorum.
 Sat fatis Venerique datum, tetigere quod arva
 Fertilis Ausoniae Troes. Sunt et mea contra
 Fata mihi, ferro sceleratam excindere gentem,
 Conjuge praecepta; nec solos tangit Atridas
 Iste dolor, solisque licet capere arma Mycenis.
 Sed periisse semel satis est. Peccare fuisset
 Ante satis, penitus modo non genus omne perosos
 Femineum. Quibus haec mediis fiducia valli
 Fossarumque morae, leti discrimina parva,
 Dant animos.—*Aeneid*, ix., 133–144.

1. Parse (giving both *accidence* and *syntax*), *fatis*, *fertilis*, *conjuge*, *solis*, *genus*, *quibus*, *fossarum*, *discrimina*.

2. Conjugate the verbs to which belong *datum*, *tetigere*, *excindere*, *praecepta*, *licet*, *capere*, *periisse*, *dant*.

3. Decline *deorum*, *Veneri*, *gentem*, *dolor*, *omne*, *haec*, *fiducia*.

SECTION II.

Translate—

At subitus miseræ calor ossa reliquit;
 Excussi manibus radii revolutaque pensa.
 Evolat infelix, et femineo ululatu,
 Scissa comam, muros amens atque agmina cursu
 Prima petit, non illa virum, non illa pericli
 Telorumque memor; cœlum dehinc questibus implet:
 "Hunc ego te, Euryale, adspicio? tunc ille senectæ
 Sera meae requies, potuisti linquere solam
 Crudelis? nec te, sub tanta pericula missum,
 Affari extremum miseræ data copia matri?
 Heu, terra ignota canibus date præda Latinis
 Alitibusque jaces! nec te in tua funera mater
 Produxit, pressive oculos, aut vulnera lavi,
 Veste tegens, tibi quam noctes festina diesque
 Urgebam et tela curas solabar aniles."—*Aeneid*, ix., 475–489.

1. Give the government of *miseræ*, *comam*, *pericli*, *questibus*, *tibi*, *tela*.

2. Parse (giving the *accidence* and *syntax*), *ossa*, *manibus*, *agmina*, *requies*, *solam*, *date*, *veste*.

3. Conjugate the verbs to which belong *excussi*, *revoluta*, *petit*, *linquere*, *missum*, *produxit*, *pressi*, *lavi*, *tegens*.

SECTION III.

Translate—

Et quis homo? quamquam nullam nobilitatem, nullos honores, nulla merita cuiquam ad dominationem pandere viam; sed tamen Claudios Cassios consulatibus decemviratibus suis majorumque honoribus splendore familiarum sustulisse animos, quo nefas fuerit: Spurius Maelium, cui tribunatus plebis magis optandus quam sperandus fuerit, frumentarium divitem, bilibris farris sperasse libertatem se civium suorum emisse, ciboque obijciendo ratum victorem finitimorum omnium populum in servitutem perlicet posse, ut quem senatorem concoquere civitas vix posset,

regem ferret, Romuli conditoris, ab diis orti, recepti ad deos, insignia atque imperium habentem. Non pro scelere id magis quam pro monstro habendum, nec satis esse sanguine ejus expiatum, nisi tecta parietesque, intra quae tantum amentiae conceptum esset, dissiparentur bonaque contacta pretiis regni mercandi publicarentur.—*Livy*, iv. 15.

1. Parse (giving the *accidence* and *syntax*), *nobilitatem*, *consulatibus*, *divitem*, *farris*, *ratum*, *Romuli*, *scelere*, *amentiae*.

2. Conjugate the verbs to which belong *sustulisse*, *emisse*, *objiciendo*, *pellici*, *concoquere*, *recepti*, *habendum*, *contacta*.

3. Why is *pandere* in the infinitive mood? and why *fuerit* in the subjunctive?

SECTION IV.

Translate—

Transierat ex re bene gesta superbia negligentiaque ad Aequos, quae in Romanis ducibus fuerat. Itaque primo statim proelio cum dictator equitatu immisso antesignanos hostium turbasset, legionum inde signa inferri propere jussit, signiferumque ex suis unum cunctantem occidit. Tantus ardor ad dimicandum fuit, ut impetum Aequi non tulerint, victique acie cum fuga effusa petissent castra, brevior tempore et certamine minor castrorum oppugnatio fuit quam proelium fuerat. Captis direptisque castris cum praedam dictator militi concessisset, secutique fugientem ex castris hostem equites renuntiassent omnes Labicanos victos, magnam partem Aequorum Labicos confugisse, postero die ad Labicos ductus exercitus, oppidumque corona circumdata scalis captum ac direptum est.—*Livy*, iv., 47.

1. Parse (giving both *accidence* and *syntax*), *re*, *ducibus*, *equitatu*, *legionum*, *impetum*, *acie*, *certamine*, *militi*, *Labicos*, *scalis*.

2. Conjugate the verbs to which belong *transierat*, *im-misso*, *inferri*, *occidit*, *tulerint*, *effusa*, *direptis*, *concessisset*, *ductus*.

3. Decline *hostium*, *tempore*, *equites*, *partem*, *die*.

SECTION V.

1. Describe the Roman plebs.

2. What led to the Institution of the Tribune? In what consisted the great power of that office?

3. What was a Roman colonia? Mention some of the earliest, and the purpose for which each was founded.

4. Give an account of the Second Samnite War.

5. Narrate the successive changes in the Roman laws concerning debt.

6. What effect had the irruption of the Gauls on the history of Italy?

SECTION VI.

1. What led to the first Punic War? and what were its results?

2. Give an account of Publius Scipio Africanus.

3. What effect had the existence of slavery among them on the people, the government, and the history of Rome?

4. Give an account of the Gracchi.

5. At what time was Greek literature first introduced into Rome? What authors distinguished themselves by imitating or reproducing it?

6. Give an account of the first Triumvirate.

(To be continued.)

Proceedings of Institutions.

LEEDS YOUNG MEN'S ASSOCIATION.—The sixth annual report of this Association says:—The number of subscribers has been 400, of whom 200 were members of the Association. As at least 500 subscribers are necessary to render the Institution self-supporting, it is hoped the subscribers generally will assist the Committee in attaining so desirable a result. Consequent upon the frequent change of residence in the class from which its ranks are

chiefly recruited, a large annual accession of new subscribers is absolutely requisite to maintain its present position. From the foregoing statement it will not be matter of surprise that the Society is considerably in debt. Having a due regard to the efficiency and comfort of the subscribers, the Committee cannot recommend any important reduction in their present expenditure. The extra annual income required to place the Association in a sound financial position is so small, that the Committee are satisfied the appeal will not be in vain when the position and claims of the Society are fully known and appreciated. A few months ago it was determined to admit ladies to the library and lectures on payment of a small annual subscription; and it is hoped a large accession of lady subscribers will justify the wisdom of this arrangement. The library contains upwards of 1,500 volumes, 80 having been added by purchase and donation during the past year. The latest works published are obtained from W. H. Smith and Son's library, for temporary circulation. The issues during the year amount to 6,000, an evidence of the value of this important agency in the estimation of the subscribers. The Committee are anxious to increase the efficiency of this department by larger additions, especially of works of reference. Donations for this special object are invited. A classified catalogue is in preparation. Several magazines and newspapers have been added to the list, and the news-room is now well supplied with periodical literature. The following public lectures have been delivered in the Stock-Exchange Hall, under the auspices of the Society:—"John Wesley; a Presbyterian's Sketch of the Methodists," Rev. Dr. Archer, London. "The Triumphs of Self-education; illustrated by examples," Rev. J. Baker, Pontefract. "Life and Times of Cranmer," Rev. J. Bardsley, M.A., Liverpool. "Rome," Rev. J. Blomefield, M.A., Leeds. "Music,"—with illustrations—Rev. Dr. Brewer, Leeds. "The Seventh Commandment," Rev. W. Brock, London. "The Insect World, a Testimony of God," Rev. J. D. Brocklehurst, Leeds. "Jerusalem,"—illustrated—J. Hammond, Esq., LL.B., Leeds; two lectures. "Japan and the Japanese,"—illustrated—Dr. Macgowan, London; two lectures. "Luther and Loyola, a Parallel and a Contrast," Rev. M. Miller, Heywood. "Dominoes; or, Keeping up Appearances at Home, Abroad, in the Schools, and Churches," Rev. J. B. Owen, M.A., Chelsea. "The Materials of which Men are Made, with a few Specimens from the Factory," Rev. F. J. Sharr, Liverpool. Electricity; the Induction Coil"—with experiments—E. Wheeler, Esq., C.E.; two lectures. The audiences have been larger than in any previous year, and the lectures have been exceedingly interesting and instructive. The valuable services of the lecturers, in every case so cordially rendered, are gratefully acknowledged. The following educational classes, containing about 100 pupils, have been in successful operation:—Mathematics and Physics; French; German; Book-keeping; Short-Hand; Reading, Writing, Arithmetic, and Grammar. At the Society of Arts' Examination, last year, a prize of £1 was presented by the Committee of the Institution to each holder of a first-class certificate. The annual *soirée* held in the music-hall, under the presidency of G. S. Beecroft, Esq., M.P., was of an interesting and successful character. In addition to the distribution by the chairman of the prizes and certificates awarded by the Society of Arts, the meeting was addressed by E. Baines, Esq., M.P., and other gentlemen. The Society has, during the year, sustained a serious loss in the lamented death of its esteemed treasurer, Thomas Edward Plint, Esq., to whose judicious counsel and liberal support it owes much of its success.

PATENT LAW AMENDMENT ACT.

APPLICATIONS FOR PATENTS AND PROTECTION ALLOWED.

[From Gazette, August 22nd, 1862.]

Dated 15th April, 1862.

1090. T. W. Gray, 114, Fenchurch-street—Imp. in the manufacture of explosive compounds. (A com.)

Dated 21st April, 1862.

1153. E. H. C. Monckton, 5, Thurloe-place, South Kensington—Imp. in the preparation of metal to be used in the construction of cannon, rifles, armour plates, and other objects used in naval or military warfare or otherwise.

Dated 22nd April, 1862.

1167. E. H. C. Monckton, Thurloe-place, South Kensington—Imp. in umbrellas, parasols, awnings, tents, and covering cloths, and in waterproofing the same.

Dated 23rd April, 1862.

1184. A. Hodgkinson, Belfast—A mixture or composition to be used in the process of boiling, preparing, or bleaching vegetable substances, whether they are in the manufactured or unmanufactured state, which mixture may also be used in the manufacture of soap.

Dated 13th June, 1862.

1766. J. Robinson, Rochdale—Imp. in machinery or apparatus for sawing wood.

Dated 28th June, 1862.

1902. James Petrie, Rochdale—Imp. in slide valves for steam engines

Dated 15th July, 1862.

2032. E. Draper and E. Thomas, Birmingham—A new or improved method of strengthening wooden shutters and doors.

Dated 18th July, 1862.

2051. J. Willcox, 89, Chancery-lane—A new ornamental fabric, and the machinery for producing the same. (A com.)

2053. F. L. Stott, Rochdale—Imp. applicable to mechanism or apparatus for warping yarns or threads.

Dated 22nd July, 1862.

2083. R. Crogan, 22, Westbourne-gardens, Bayswater—Imp. in screw propellers of steam vessels, and in the arrangement thereof.

Dated 23rd July, 1862.

2093. C. J. Keene, 10, Shrewsbury-villas, Bayswater—A new or improved winding apparatus for raising and lowering canvas on easels.

2095. E. K. Dutton, Stretford, Lancashire—Certain imp. in steam-engines.

2097. W. Clark, 53, Chancery-lane—Imp. in the manufacture of manure. (A com.)

2099. R. Bell, Westland-row, Dublin—Imp. in the manufacture of bricks. (A com.)

Dated 24th July, 1862.

2101. J. Dickson, 66, Tollington-road, Holloway—Imp. in treating copper ores and solutions of copper to obtain copper therefrom.

2103. W. Clissold, Dudbridge, Gloucestershire—An improved mode of manufacturing cylinders.

2105. T. Lemaistre, Paris, 3, Rue de Grammont—Imp. in privies.

2107. W. H. Perkin, Seymour-villa, Sudbury—Imp. in printing and dyeing when aniline and analogous coal tar dyes are employed, also in preparing colouring matters. (A com.)

Dated 25th July, 1862.

2111. J. Redgate, Sneyton, Nottinghamshire, and H. Redgate, Stoney-street, Nottinghamshire—Imp. in machinery or apparatus for the manufacture of fabrics on bobbin net or twist lace machines.

2113. P. Robertson, Glasgow—Imp. in producing brushing or frictional surfaces.

2115. J. Seymour, Queenstown, Cork, and D. G. Hatcher, Southampton—Imp. in steering ships, and in apparatus for the same.

2117. V. Manzini, Modena, Italy—Certain imp. in the construction of locomotive engines used on railways for facilitating and controlling the ascent and descent of locomotive engines and trains on inclined planes of lines of railway, and for simplifying the construction of locomotives used on railways.

2119. A. Lahousse, Lupus-street, Pomicco—An improved construction of railway wheel.

Dated 26th July, 1862.

2121. T. Sagar and J. Rodcliff, Burnley, Lancashire—Imp. in moulding.

2123. W. Clark, 53, Chancery-lane—Imp. in obtaining or extracting silver from ores and other bodies, and in apparatus for the same. (A com.)

2125. T. Long, 2, Clarendon-place, Notting-hill—Imp. in the manufacture of open metal work, applicable to various useful purposes.

Dated 28th July, 1862.

2130. W. Spence, 50, Chancery-lane—Imp. in the preparation of a red colouring matter. (A com.)

2131. P. S. Devlan, Manchester—Certain imp. in the manufacture of telegraphic cables.

2132. W. Spence, 50, Chancery-lane—Imp. in the preparation of a blue colouring matter. (A com.)

2135. T. Cook, Manor-place, Walworth—Imp. in apparatus employed in the manufacture of envelopes.

2137. J. Fourdrinier, Grove-terrace, Peckham—Imp. in apparatus for removing knots from pulp.

2139. F. Selby, Surbiton, Surrey—Imp. in surface condensers.

2141. E. Burnett, Ashford, Kent—An improved combined cart and sleigh.

2143. C. W. Siemens, 3, Great George-street, Westminster—Imp. in gas engines.

Dated 29th July, 1862.

2145. Z. Colburn, 15, Tavistock-street, Bedford-square—Imp. in steam pumping engines.

2147. A. Boyle and T. Warwick, Birmingham—Imp. in the manufacture of the ribs and stretchers of umbrellas and parasols, and in machinery to be employed in the said manufacture.
2149. P. S. Devlan, Commercial-street, Manchester—An improved composition to be employed for covering projectiles and the internal and external surfaces of vessels, which is also applicable to the manufacture of tubing and to other useful and ornamental purposes.
2151. G. T. Burgess, Brentwood, Essex—An improved stand for beer and other casks.
2153. J. Mapple, 2, Newman's-place, Kentish Town, and D. Mapple, 3, Queen's-road, Homerton New Town—Imp. in telegraphic apparatus.
2155. M. Henry, 84, Fleet-street—Imp. in obtaining fibrous materials and paper pulp, in treating, cleansing, and scouring fibrous materials and fabrics manufactured thereof, in producing soap for the said operations, and in obtaining products from liquors used therein. (A com.)

Dated 30th July, 1862.

2159. J. Hyde and J. Hyde, Bradbury, Chester—Certain imp. in governors for steam engines, water wheels, mills, and for other similar purposes.
2163. J. Benyon, Swinton, near Manchester—Certain imp. in looms for weaving.
2165. W. Clark, 53, Chancery-lane—Imp. in gas burners. (A com.)
2169. J. W. Woodford, Sutherland-street, Walworth—Imp. in machinery for raising or forcing water.

Dated 31st July, 1862.

2171. W. Weild, Manchester—Imp. in machines for cutting, shaping, rolling, drilling, screwing, milling, and fluting metals.
2173. C. Bedells, Leicester—Imp. in the manufacture of braces.
2175. A. V. Newton, 66, Chancery-lane—Improved machinery for planing metal. (A com.)

Dated 1st August, 1862.

2177. J. List, Carisbrooke, Isle of Wight—An improved means of and instruments for obtaining distances and heights, and distances between distant objects, without computation.
2179. D. T. Lee, Birmingham—An imp. or imps. in ornamenting surfaces of wood and of papier mache.
2181. G. A. Biddell, Ipswich—Imp. in railway crossings.
2187. T. G. Webb, Manchester—Imp. in the manufacture of flint glass.

Dated 2nd August, 1862.

2189. J. Briggs, Blackley, Lancashire—Imp. in the manufacture of belts, webs, braids, tapes, laces, and other similar articles produced by weaving, plaiting, or twisting.
2193. G. Coles, Gresham-street West, and J. A. Jaques and J. A. Fanshawe, Tottenham—Imp. in the manufacture of grinding and polishing tools and surfaces.

Dated 4th August, 1862.

2194. A. Denny and E. M. Denny, Waterford, Ireland—Imp. in the manufacture of bacon.

Dated 5th August, 1862.

2195. S. Simon, Tuilerie-street, Hackney road—An imp. in ornamenting ladies' and children's slippers.
2198. J. Townsend, Glasgow—Imp. in damping cotton and other fibrous materials and fabrics, in preserving the same from mildew, and in preserving size or stiffening from decomposition.
2199. W. Clark, 53, Chancery-lane—Imp. in the purification of water, and in apparatus employed therein. (A com.)
2201. J. R. Nicholl, Streatham, Surrey—Improved means of, and apparatus for, utilizing and disposing of the sewage of towns and villages.

Dated 6th August, 1862.

2203. W. W. Burdon, Newcastle-upon-Tyne—Imp. in reducing wood fibres to pulp.
2205. M. C. Sinibaldi, 1, South-villas, South-street, Greenwich—Imp. in the manufacture of chains, and in the apparatus employed therein.
2207. F. Nauheim, Cecil-street, Mile-end-road—An imp. in the ornamenting of boots, shoes, and goloshes.

Dated 8th August, 1862.

2222. J. Whipp, Rochdale—An improved arrangement of apparatus and means for cleaning articles of ornament and jewellery.
2224. R. A. Brooman, 166, Fleet-street—Imp. in repeating fire arms. (A com.)
2226. E. Humphrys, Deptford—Imp. in steam engines.

Dated 9th August, 1862.

2230. G. Haseltine, 100, Fleet-street—Imp. in carriage wheels. (A com.)
2234. A. J. Moreau and A. E. Ragon, Bernard-street, Russell-square—Imp. in the manufacture of gas and coke.

Dated 11th August, 1862.

2238. H. Fenton and W. Stubbs, Liverpool—Imp. in telegraph wires.
2240. J. Goodfellow, Blackburn—Imp. in steam or water engines.
2242. W. Clark, 53, Chancery-lane—An improved carriage for conveying sugar moulds in sugar refineries. (A com.)
2246. W. E. Gedge, 11, Wellington-street, Strand—Imp. in the construction of ladders. (A com.)
2248. H. Donald, Renfrew, N.B.—Imp. in machinery for shearing, punching, and riveting metals.
2250. R. Gresty, Packington-street, Islington—Imp. in scarfs or cravats.

Dated 12th August, 1862.

2254. J. Dickson, 66, Tollington-road, Holloway—Imp. in treating ores and solutions of lead to obtain lead therefrom.
2258. C. M. Westmacott, 42, Noble-street—Imp. in cements.
2262. C. Sengry, 54, Great Queen-street, Lincoln's-inn-fields—An improved smoking pipe, which may also be adapted as a tube for smoking cigars.
2264. J. Bower, Carlou—Imp. in railway sleepers.

Dated 13th August, 1862.

2266. J. Dickson, 66, Tollington-road, Holloway—Imp. in obtaining sodium from certain sources of that metal.
2270. C. W. Smith and W. Mould, Belmont, Lancashire, and S. Cook and W. H. Hacking, Bury—Imp. in looms for weaving.
2272. J. Peters, Wouldham-hall, Rochester—An improved hydraulic cement.
2274. G. Turner, Woolwich Dockyard—Imp. in fastening armour plates of ships.
2276. L. Galli, Lucca, Tuscany—Imp. in apparatus for propelling vessels.
2278. J. H. Johnson, 47, Lincoln's-inn-fields—Imp. in carts and other vehicles. (A com.)

Dated 14th August, 1862.

2282. J. Key and E. Hoskins, Birmingham—An imp. or imps. in the manufacture of plain and ornamental metallic pillars for bedsteads, cots, couches, tables, and other like purposes.
2284. C. E. Wilson, Monkwell-street—An imp. in buckle fastenings for braces and belts.
2288. H. R. Passey and L. Niman, 17, Little Newport-street, Leicester-square—An improved cigar tube or holder.
2290. W. J. Curtis, Tufnell-park-road, Holloway—An improved mode of, and apparatus for, ascertaining the fares and earnings of public vehicles.
2294. W. B. Herapath, 32, Old Market-street, Bristol—Imp. in decolorising solutions of sugar, and also vegetable juices containing sugar.
2296. W. B. Herapath, 32, Old Market-street, Bristol—Imp. in treating crystallizable sugar to render it more suitable for fermentation and conversion into alcohol and vinegar.

Dated 15th August, 1862.

2302. T. F. Kirby, Aldersgate-street—Imp. in garments for gentlemen and ladies' wear.

INVENTION WITH COMPLETE SPECIFICATION FILED.

2298. M. A. F. Mennons, 24, Rue du Mont Thabor, Paris—An improved apparatus for the production of sealing wax impressions. (A com.)—15th August, 1862.

PATENTS SEALED.

[From Gazette, August 22nd, 1862.]

August 22nd.

- | | |
|---|--|
| 471. W. H. Ross. | 538. Sir C. T. Bright. |
| 472. J. Kirkwood. | 541. J. R. Foster. |
| 473. A. Bornemann. | 542. W. S. Wood. |
| 476. C. H. J. W. M. Liebmann. | 543. J. Revell. |
| 480. G. Blakey, S. Blakey, J. Blakey, and B. White. | 544. P. D. Azemar. |
| 482. R. Foster, jun. | 545. W. H. Muntz. |
| 485. W. Johnson. | 546. A. W. Makinson and W. F. Batho. |
| 488. J. C. Haddan. | 552. J. Parker. |
| 489. R. Waller. | 554. T. Bradford. |
| 495. L. Davis and F. M. Parkes. | 682. L. Vidie. |
| 497. F. St. G. Smith. | 690. S. V. Bonnetterre, C. T. Erhart, and J. F. Monti. |
| 502. J. Piddington. | 744. T. Myers. |
| 504. E. Bliss and H. Lamplough. | 863. W. A. Ashe. |
| 506. T. Watson and R. Dracup. | 866. E. T. Nouhalier. |
| 512. C. Kingsford. | 957. L. Lindley and F. Taylor. |
| 514. H. W. Cook. | 1020. E. Funnell. |
| 516. A. Green. | 1084. A. V. Newton. |
| 517. A. Stephen, jun. | 1124. G. T. Bousfield. |
| 523. T. King and R. Vardill. | 1189. W. E. Newton. |
| 524. J. Cliff. | 1231. S. Cheavin and G. Cheavin. |
| 526. C. L. Knoll. | 1248. J. E. A. Gwynne. |
| 529. W. P. Savage. | 1610. J. Critchley. |
| 530. J. Medhurst. | 1618. R. Griffiths. |
| 531. J. Smith. | 1733. J. G. Appold. |
| 532. G. Torr. | 1830. J. Taylor. |
| 533. T. Adams. | 1886. J. Lord. |
| 536. W. Smith. | |

PATENTS ON WHICH THE STAMP DUTY OF £50 HAS BEEN PAID.

[From Gazette, August 22nd, 1862.]

- | | |
|--------------------------------------|-------------------------------------|
| <i>19th August.</i> | 1970. J. H. Johnson. |
| 1905. W. T. Henley. | <i>21st August.</i> |
| 1914. G. W. Petter and T. D. Galpin. | 1958. E. Rettig. |
| 1915. W. A. Verel. | <i>23rd August.</i> |
| 1944. M. J. Stark. | 1933. J. Henry and J. E. H. Andrew. |
| <i>20th August.</i> | 1950. C. Hanson. |
| 1917. J. J. O. Taylor. | |

PATENTS ON WHICH THE STAMP DUTY OF £100 HAS BEEN PAID.

[From Gazette, August 22nd, 1862.]

- | | |
|---------------------|------------------------|
| <i>18th August.</i> | <i>23rd August.</i> |
| 1877. A. Savage. | 1921. C. Schlickeysen. |